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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,639	08/16/2006	Toshio Isozaki	294568US0PCT	2292

22850 7590 03/16/2011

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EXAMINER	
LACLAIR, DARCY D	

ART UNIT	PAPER NUMBER
1763	

NOTIFICATION DATE	DELIVERY MODE
03/16/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	**Application No.** 10/589,639	**Applicant(s)** ISOZAKI ET AL.	
	Examiner Darcy D. LaClair	**Art Unit** 1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 February 2011*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,4 and 11-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1,3-4,11-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. All outstanding rejections, except for those maintained below are withdrawn in light of the amendment filed on **2/28/2011**.

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn. Thus, *a non-final Office action is set forth as follows.*

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

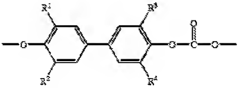
2. **Claims 1, 3-4, 11-18 and 20-22** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Okamoto et al.** (**WO 02/36687 A1**) in view of **Gorny et al.** (**US 2004/0013882**) and **Reinert et al.** (**US 4,303,575**)

It is noted that the international Patent Application WO publication is being utilized for date purposes. However, since **WO 02/36687** in Japanese, in the discussion below, the US equivalent for **WO 02/36687**, namely **US 2004/0030044**) is referred to in the body of the rejection below. All column and line citations are to the US equivalent.

With respect to Claims 1 and 12, Okamoto teaches a polycarbonate resin composition for parts such as home and office appliances, telephones, automobile parts, and the like (see par [0180]), having a resin mixture having 1 to 99 percent by weight of a polycarbonate based resin and from 1 to 99 parts by weight of a styrenic resin. (See par [0158]) Okamoto teaches that the polycarbonate component (see par

[0159]) includes a terminal modified polycarbonate prepared from dihydroxydiphenyls (see par [0063]), consistent with applicant's (A-1) and other polycarbonate copolymers such as polycarbonate polyorganosiloxane copolymer, consistent with applicant's (A-2). (See par [0133]) Okamoto exemplifies the terminal modified polycarbonate to polycarbonate-polyorganosiloxane ratio as 75:25, 50:25, (See Table II-1-(1)) 65:25, 10:80, 50:40 (See Table II-2-(1)) and other ratios falling within applicant's required relationships for component (A-1) and component (A-2). (See Table III-1, III-3) The styrene resins are acrylonitrile-styrene copolymers (AS), (see par [0161]) or rubber modified styrene resins such as ABS resins, MBS resins, (see par [0162], [0164]) having between 2 and 50% weight of rubber modifying them. (See par [0163]) This is consistent with an amorphous styrene. The composition additionally contains from 0.2 to 5 parts by weight of a functional group having silicone compound. (See par [0171]-[0172]) Further, Okamoto teaches that typical additives to improve the properties of the composition, such as flame retardants, and flame retardation promoters can be added to the composition. (See par [0086], [0177]) Furthermore, Okamoto desires to reduce or eliminate the halogen and/or phosphorous containing flame retardants. (See [0400]).

Okamoto does not explicitly teach a content of dihydroxybiphenyl in the terminal modified polycarbonate or the use of a metal salt of perfluoroalkane sulfonic acid or aromatic vinyl resin containing sulfonate groups.

Gorny teaches a copolycarbonate derived from repeat units having the structural formula  (I), and other repeat units. (See abstract) Copolycarbonates containing structural units derived from 4,4'-dihydroxydiphenylene (DOD)have improved chemical resistance with respect to a bisphenol A homopolymer. (See par [0006]) Gorny indicates, also, that it is known that copolycarbonates based on 4,4'-dyhydroxydiphenyl and bisphenol A are fuel resistant, heat resistant, and flame resistant and have mechanical properties and transparency comparable with known polycarbonates. (See par [0019]) Gorny teaches a copolycarbonate having 0.1 to 46 mol%, and most preferably 26 to 34 mol% of the formula (I). (See par [0021]) The preferred repeat unit for (I) is 4,4'-dihydroxydiphenyl (DOD), and another dihydroxydipenyl unit. (See par [0026]). The resin is useful in various visual panels, in automobiles, as housings for machines, and in a variety of other sectors. (See par [0035]-[0039]) This is consistent with Okamoto's use of the polycarbonate. It is noted that these structural units are taught by Okamoto and are internal to the polycarbonate chain and thus could readily be employed in Okamoto in terms of the percentage of the various repeat units without detracting from Okamoto's special terminal end groups. Based on the beneficial properties of this particular copolycarbonate, it would be obvious to one of ordinary skill in the art to employ this particular copolycarbonate as the polycarbonate of Okamoto in order to improve the chemical, fuel, heat, and flame resistance, while maintaining good mechanical properties.

Reinert teaches a flame retardant polycarbonate composition having polycarbonate resin, a perfluoroalkane sulfonate, and a halogenated aromatic anhydride. The perfluoroalkane salts useful in the practice are potassium or sodium (M=Na or K) perfluoroalkane sulfonates having from 1 to 8 carbon atoms (a = 1 to 8), and as these are salts, the number of perfluoroalkane sulfonate groups would necessarily be consistent with the valence of the alkali or alkaline metal. These are incorporated at a level of 0.01 to 1 percent by weight based on the weight of the polycarbonate component. (See col 3 line 46 - col 4 line 2) Polycarbonate compositions having this composition exhibit suppressed molten dripping and a V-0 rating on the UL 94 test, which is good flame resistance. It would be obvious to one of ordinary skill in the art to use the alkali metal sulfonates of Reinert in the composition of Okamoto in order to increase the resistance to burning while maintaining a reduction or absence of halogen and/or phosphorous containing flame retardants, and to realize improved flame retardance provided by this known additive.

With respect to Claims 3 and 4, Okamoto teaches that the polycarbonate-polyorganosilixane copolymer is prepared by dissolving a polycarbonate oligomer and a polyorganosiloxane having a reactive group at its terminal, such as polydimethylsiloxane. (See par [0133])

With respect to Claim 11, Okamoto teaches that moldings of the resin composition are prepared and used in various housings and parts. (See par [0180])

With respect to Claim 13 and 15, Okamoto teaches that the composition contains inorganic filler from 2 to 50 parts by weight per 100 parts by weight of the resin mixture. (See par [0176])

With respect to Claim 14 and 16, Okamoto teaches a core/shell type grafted rubber elastomer for use in the composition (see par [0143],[0144]) which acts as a impact resistance improver due to its rubber-like properties. This is present in 0.2 to 10 parts by weight relative to 100 parts by weight of the polycarbonate based resin. (See par [0149])

With respect to Claim 17, the functional group having silicone has the basic structure of formula $R^1_aR^2_bSiO_{(4-a-b)/2}$, where R1 is a functional group, and R2 is a hydrocarbon residue having from 1 to 12 carbon atoms, and $0<a\leq 3$, $0<b\leq 3$m and $0<a+b\leq 3$. The functional group is an alkoxy group, an aryloxy group, a polyoxyalkylene group, a hydride residue, a hydroxyl group, a carboxyl group, a silanol group, an amino group, a mercapto group, an epoxy group. (See par [0138])

With respect to Claim 18, the perfluoroalkane sulfonate salts of Reinert (see the discussion of Claims 1 and 12, above) include potassium perfluoroalkane sulfonate compounds. The alkanes are butane, methylbutane, octane, methane, ethane, propane, hexane, and heptane. (See col 3 line 46-55)

With respect to Claim 20, Okamoto teaches that the composition is melted and kneaded at 280°C, and dried at 120°C. (See par [0205]) Thus it appears that the heat deformation temperature is above 120°C and below 280°C, which is above 110°C, as required.

With respect to Claim 21, Okamoto teaches a melt flowability of 44-47 g/10 min for the compositions. (See Table II-1(1)) The copolycarbonate of Gorny is has a viscosity such that it can be melt extruded, as well as processed by conventional units. (See par [0156]) . Taken in combination, it is the examiner's position that a spiral flow length of 35 or greater would be achieved by the combination of Okamoto and Gorny.

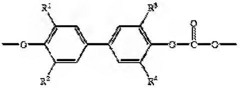
With respect to Claim 22, the flame retardant compounds of Reinert give a V-0 rating on the UL 94 test. (See the discussion of Claims 1 and 12, above) Although Reinert does not explicitly report a limiting oxygen index, it is the examiner's position that with the use of 0.01 to 1 percent by weight of Reinert's perfluoroalkane sulfonate salts used in the composition of Okamoto, a LOI of 39-41 would be expected.

3. **Claims 1, 3-4 and 11-22** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Okamoto et al. (WO 02/36687 A1**) in view of **Gorny et al.** (**US 2004/0013882**) and **Nodera et al.** (**WO 02/057369 A1**)

It is noted that the international Patent Application WO publications are being utilized for date purposes. However, since **WO 02/36687** and **WO 02/057369** are in Japanese, in the discussion below, the US equivalents, namely **US 2004/0030044** and **US 2004/0059068**, respectively, are referred to in the body of the rejection below. All column and line citations are to the US equivalent.

With respect to Claims 1 and 12, Okamoto teaches a polycarbonate resin composition for parts such as home and office appliances, telephones, automobile parts, and the like (see par [0180]), having a resin mixture having 1 to 99 percent by

weight of a polycarbonate based resin and from 1 to 99 parts by weight of a styrenic resin. (See par [0158]) Okamoto teaches that the polycarbonate component (see par [0159]) includes a terminal modified polycarbonate prepared from dihydroxydiphenyls (see par [0063]), consistent with applicant's (A-1) and other polycarbonate copolymers such as polycarbonate polyorganosiloxane copolymer, consistent with applicant's (A-2). (See par [0133]) Okamoto exemplifies the terminal modified polycarbonate to polycarbonate-polyorganosiloxane ratio as 75:25, 50:25, (See Table II-1-(1)) 65:25, 10:80, 50:40 (See Table II-2-(1)) and other ratios falling within applicant's required relationships for component (A-1) and component (A-2). (See Table III-1, III-3) The styrene resins are acrylonitrile-styrene copolymers (AS), (see par [0161]) or rubber modified styrene resins such as ABS resins, MBS resins, (see par [0162], [0164]) having between 2 and 50% weight of rubber modifying them. (See par [0163]) This is consistent with an amorphous styrene. The composition additionally contains from 0.2 to 5 parts by weight of a functional group having silicone compound. (See par [0171]-[0172]) Further, Okamoto teaches that typical additives to improve the properties of the composition, such as flame retardants, and flame retardation promoters can be added to the composition. (See par [0086], [0177]) Furthermore, Okamoto desires to reduce or eliminate the halogen and/or phosphorous containing flame retardants. (See [0400]) Okamoto does not explicitly teach a content of dihydroxybiphenyl in the terminal modified polycarbonate or the use of a metal salt of perfluoroalkane sulfonic acid or aromatic vinyl resin containing sulfonate groups.

Gorny teaches a copolycarbonate derived from repeat units having the structural formula  (I), and other repeat units. (See abstract) Copolycarbonates containing structural units derived from 4,4'-dihydroxydiphenylene (DOD)have improved chemical resistance with respect to a bisphenol A homopolymer. (See par [0006]) Gorny indicates, also, that it is known that copolycarbonates based on 4,4'-dyhydroxydiphenyl and bisphenol A are fuel resistant, heat resistant, and flame resistant and have mechanical properties and transparency comparable with known polycarbonates. (See par [0019]) Gorny teaches a copolycarbonate having 0.1 to 46 mol%, and most preferably 26 to 34 mol% of the formula (I). (See par [0021]) The preferred repeat unit for (I) is 4,4'-dihydroxydiphenyl (DOD), and another dihydroxydipenyl unit. (See par [0026]). The resin is useful in various visual panels, in automobiles, as housings for machines, and in a variety of other sectors. (See par [0035]-[0039]) This is consistent with Okamoto's use of the polycarbonate. It is noted that these structural units are taught by Okamoto and are internal to the polycarbonate chain and thus could readily be employed in Okamoto in terms of the percentage of the various repeat units without detracting from Okamoto's special terminal end groups. Based on the beneficial properties of this particular copolycarbonate, it would be obvious to one of ordinary skill in the art to employ this particular copolycarbonate as the polycarbonate of Okamoto in order to improve the chemical, fuel, heat, and flame resistance, while maintaining good mechanical properties.

Nodera teaches a polycarbonate composition (see par [0041]) having a styrene component (see par [0049]), fibril forming PTFE (see par [0106]) and a reactive silicone compound (see par [0198]) which is similar in composition to that of Okamoto. Nodera teaches that the composition should have an organic metallic salt. This includes organic sulfonic acids and acid-salt-group containing aromatic vinyl based resins. The organic sulfonic acids include compounds such as an alkali metal salt of perfluoroalkane sulfonic acids having alkanes of 1 to 8 carbons, an alkali or alkaline earth metal, and as these are salts, the number of perfluoroalkane sulfonate groups would necessarily be consistent with the valence of the alkali or alkaline metal. These in particular include potassium salts of perfluoroalkanesulfonic acids. (See par [0196]) The aromatic vinyl based resins are preferably derived from styrene (see par [0198]) and have a preferred structure consistent with formula III of Claim 1. (See par [0199]) This component is incorporated in the composition in an amount 0.05 to 2% by mass. (See par [0203]) When used in combination with a PTFE component, this allows an improved flame retardancy. (See par [0204]) This is observed in Nodera on p. 19-20 Table III-1. When 0.01 or 1 parts of the organic metallic salt is used, a V-0 rating is achieved. The particular sulfur containing metallic salts are potassium perfluorobutanesulfonate (see par [0232]) and sodium polystyrene sulfonate. (See par [0237]).

It would be obvious to one of ordinary skill in the art to use the alkali metal sulfonates or acid-salt-group containing aromatic vinyl based resins of Nodera in the composition of Okamoto in order to increase the resistance to burning while maintaining

a reduction or absence of halogen and/or phosphorous containing flame retardants, and to realize improved flame retardance provided by this known additive.

With respect to Claims 3 and 4, Okamoto teaches that the polycarbonate-polyorganosilixane copolymer is prepared by dissolving a polycarbonate oligomer and a polyorganosiloxane having a reactive group at its terminal, such as polydimethylsiloxane. (See par [0133])

With respect to Claim 11, Okamoto teaches that moldings of the resin composition are prepared and used in various housings and parts. (See par [0180])

With respect to Claim 13 and 15, Okamoto teaches that the composition contains inorganic filler from 2 to 50 parts by weight per 100 parts by weight of the resin mixture. (See par [0176])

With respect to Claim 14 and 16, Okamoto teaches a core/shell type grafted rubber elastomer for use in the composition (see par [0143],[0144]) which acts as a impact resistance improver due to its rubber-like properties. This is present in 0.2 to 10 parts by weight relative to 100 parts by weight of the polycarbonate based resin. (See par [0149])

With respect to Claim 17, the functional group having silicone has the basic structure of formula $R^1_aR^2_bSiO_{(4-a-b)/2}$, where R1 is a functional group, and R2 is a hydrocarbon residue having from 1 to 12 carbon atoms, and $0<a\leq 3$, $0<b\leq 3$m and $0<a+b\leq 3$. The functional group is an alkoxy group, an aryloxy group, a polyoxyalkylene group, a hydride residue, a hydroxyl group, a carboxyl group, a silanol group, an amino group, a mercapto group, an epoxy group. (See par [0138])

With respect to Claim 18, the potassium salts of perfluoroalkanesulfonic acids (or potassium perfluoroalkane sulfonates) of Nodera (see the discussion of Claims 1 and 12, above) include alkanes such as methane, ethane, propane, butane, methylbutane, hexane, heptane, and octane. (See par [0196])

With respect to Claim 19, the exemplified aromatic vinyl containing sulfonate group of Nodera (see discussion of Claims 1 and 12, above) is sodium polystyrene sulfonate. (See par [0237]).

With respect to Claim 20, Okamoto teaches that the composition is melted and kneaded at 280°C, and dried at 120°C. (See par [0205]) Thus it appears that the heat deformation temperature is above 120°C and below 280°C, which is above 110°C, as required.

With respect to Claim 21, Okamoto teaches a melt flowability of 44-47 g/10 min for the compositions. (See Table II-1(1)) The copolycarbonate of Gorny is has a viscosity such that it can be melt extruded, as well as processed by conventional units. (See par [0156]) . Taken in combination, it is the examiner's position that a spiral flow length of 35 or greater would be achieved by the combination of Okamoto and Gorny.

With respect to Claim 22, the flame retardant compounds of Nodera give a V-0 rating on the UL 94 test. (See the discussion of Claims 1 and 12, above) Although Nodera does not explicitly report a limiting oxygen index, it is the examiner’s position that with the use of 0.01 to 1 percent by weight of Noderas’s organic compound metallic salt as described, used in the composition of Okamoto, a LOI of 39-41 would be expected.

Response to Arguments

4. Applicant's arguments filed **2/28/2011** have been fully considered. Specifically, applicant argues

(A) Claim 1 relates to a polycarbonate composition comprising a resin mixture of components (A) where A comprises two polycarbonates (A-1) having dihydroxybiphenyl, and (A-2) which is an aromatic polycarbonate resin other than (A-1) and (B), where B is an amorphous styrene resin. This Claim is rejected over a combination of Okamoto, Meyer, and Reinert or Nodera. Okamoto and Meyer can not be properly combined because Okamoto relies on aromatic polycarbonate resin having a specific terminal group, which are relied upon repeatedly. Meyer, on the other hand relates to phenoloc compounds having branched structure used as terminal groups. These are nothing like the terminal groups in Okamoto. Therefore the combination of Meyer modifying Okamoto is not one that a person of ordinary skill would pursue, due to the very different and distinct terminal groups relied upon by each.

(B) Applicants present data which has been shown in the specification and in Declaration form as supportive of a conclusion of patentability. Examples 1 to 8 of the original specification show resin compositions that exhibit not only an excellent balance of rigidity, heat resistance, fluidity, and impact resistance, but also excellent flame retardance because the polycarbonate-biphenol copolymer is used in amounts according to the invention, thereby improving flame retardance. Comparative examples 1-4 are similar except that the copolymer is not present or is present in less than the specified amount, providing good fluidity but lowered flame retardance. Additionally,

data from the Declaration filed July 6, 2009 is presented showing Example A and 6 within the scope of the claims, and examples A-D outside the scope of the claims. The molded articles have unexpectedly superior flame retardance and impact resistance when they fall within the claimed composition.

5. **With respect to argument (A),** applicant's arguments have been considered and are persuasive. Thus the rejection over Okamoto, Meyer, and Reinert or Nodera is withdrawn.

With respect to argument (B), applicant's data has been considered, but is ***not* persuasive.** With respect to the data found in the specification, examples 1 and 7 appear to be the only examples falling within the scope of the claims, as the claims now require a metal salt or aromatic vinyl resin containing sulfonate groups. This corresponds to Metal salt-1 and Metal salt -2. The metal salt is entirely absent from the data provided in Table A, and thus no examples within this showing fall within the scope of the claims. Applicant primarily focuses on the presence of the polycarbonate-biphenol copolymer as being tied to the flame retardance, however the presence of the metal salt and PTFE component are also tied to excellent flame retardance. In fact both Reinert and Nodera teach specifically that this component should be included in order to confer excellent flame retardance. Therefore it is expected that compositions containing this combination (PTFE and metal salt) would have an excellent flame retardance. In the absence of a direct comparison where each of Metal salt, PTFE, and the A-1 polycarbonate are varied, it is not possible to determine which provides each portion of

the flame retardance observed. The closest comparison is between CE6 and E7, which have roughly equal parts of each polycarbonate (A-1, and non-A-1) some content of impact modifier, and the presence or absence of the metal salt, however the content of impact modifier and the content of silicone both vary significantly. Another close comparison is between E1 and CE2, which contain the same content of metal salt and PTFE, and have polycarbonate A-1 at 70 (within the scope of the claims) and 5 (not within the scope of the claims), respectively. In this case, the metal salt content is the same, but the choice of metal salt is not held consistent. Furthermore, these examples fall at such divergent values of the polycarbonate A-1 content that it is not possible to determine whether the result of varying the polycarbonate A-1 content is truly apparent across the entire scope of the claims. Thus the results shown are not commensurate in scope with the scope of the claimed invention. Furthermore, based on the collection of flame retardant materials present in the composition, applicants have not established the required nexus between variation of the polycarbonate A-1 content and the flame retardance effect. In all, applicants showing i not sufficient to outweigh the *prima facie* case of obviousness set forth above, where it would be beneficial to use a content less than 50% of dihydroxylbiphenyl in the polycarbonate in order to improve fuel resistance, heat resistance, and flame resistance, while maintaining mechanical properties and transparency comparable with known polycarbonates. (See Gorny, par [0019])

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darcy D. LaClair whose telephone number is (571)270-5462. The examiner can normally be reached on Monday-Friday 8:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Milton I. Cano/
Supervisory Patent Examiner, Art Unit 1763

Darcy D. LaClair
Examiner
Art Unit 1763

/DDL/